

Message

From: Porse, Erik [erik.porse@owp.csus.edu]
Sent: 10/31/2018 12:17:21 AM
To: Smith, DavidW [Smith.DavidW@epa.gov]; Annalisa Kihara [annalisa.kihara@waterboards.ca.gov]
CC: Odusoga, Abimbola [ODUSOGA.ABIMBOLA@EPA.GOV]; Kerner, Maureen [maureen.kerner@owp.csus.edu]
Subject: RE: Stormwater Costing Guide from WRF and ASCE's EWRI
Attachments: ATT00001.txt; CNT_Value-of-Green-Infrastructure.pdf; 2018_Phoenix GI_LID cost benefit analysis.pdf; USGR_EWMP_TechMemo_CostEstimates.pdf; BellinghamProgramCostData2011Jun29.pdf; OWP_GI_Cost_Resources_100818.docx

Hi All,

Mere serendipity on the timing of emails and conversations... :)

The EFC has been collecting a library of existing resources on cost estimation methods and case studies for stormwater. To date, we have not identified a comprehensive source that compiles the necessary information to estimate sustainable stormwater management costs across: 1) programs, 2) current infrastructure (asset management), and 3) future buildouts (new infrastructure). But there are a lot of good resources.

For methods to organize and estimate program costs, the WEF manual (User-Fee-Funded Stormwater Programs) is a good description of the approach, though membership is required, and there is an associated podcast.

The Upper Charles River study from 2011 (listed on the EPA stormwater site) is a nice case study combining program and infrastructure costs for long-term planning. An example table is attached, which shows program costs broken down for one of the communities.

As you probably know, there are many existing resources on costs of green infrastructure, with more recent products integrating triple-bottom line approaches and detailed estimates of costs. A gap appears to be region-specific costs (beyond just large metro areas) and benefit-valuation methods. The Center for Neighborhood Technology's Green Infrastructure guide is a nice description of economic methods to assess benefits. As a case study, a recently released report on TBL benefit-cost estimates from Phoenix is a nice product (both are attached).

For capital costs of green and grey infrastructure, the traditional sources such as RS Means are good sources, along with stormwater-focused online tools. Such estimates are usually done via a bottom-up approach. Attached is an example of planning-level estimates from the LA Enhanced Watershed Management Plans, or EWMPs.

OWP compiled a list of GI Costing resources, which is being integrated into the CASQA portal and the stormwater financing storyboard (attached).

Those are some of the highlights. At the moment, identified gaps include:

- An integrative product that presents best practices for estimating program, current, and future costs.
- Program and infrastructure cost data that takes account of differences in large and small metro areas (for instance, costs will vary throughout Region 9).
- Further actionable guidance on accounting/economic methods for benefit valuation in assessments.
- Guidance on ancillary costs and resources needed for stormwater utilities (IT, GIS, finance, etc).
- Technical assistance tools and experts to help communities feel confident that the numbers they are filling in work well.

There seems room to build on that work and fill knowledge gaps. It will be good to brainstorm.

Cheers,
Erik

From: Smith, DavidW [mailto:Smith.DavidW@epa.gov]
Sent: Tuesday, October 30, 2018 12:45 PM
To: Porse, Erik <erik.porse@owp.csus.edu>; Annalisa Kihara <annalisa.kihara@waterboards.ca.gov>
Cc: Odusoga, Abimbola <ODUSOGA.ABIMBOLA@EPA.GOV>; Kerner, Maureen <maureen.kerner@owp.csus.edu>
Subject: RE: Stormwater Costing Guide from WRF and ASCE's EWRI

Hi Folks- While we're at it, Erik, are you aware of any good resources similar to this one that address other stormwater program elements and cost estimation approaches/standards (i.e., capital cost estimation for GI/BMP/infrastructure, equipment purchase estimates, and program operation cost estimation)? Thanks
Dave

From: Porse, Erik [mailto:erik.porse@owp.csus.edu]
Sent: Tuesday, October 30, 2018 12:02 PM
To: Smith, DavidW <Smith.DavidW@epa.gov>; Annalisa Kihara <annalisa.kihara@waterboards.ca.gov>
Cc: Odusoga, Abimbola <ODUSOGA.ABIMBOLA@EPA.GOV>; Kerner, Maureen <maureen.kerner@owp.csus.edu>
Subject: Stormwater Costing Guide from WRF and ASCE's EWRI

Hi Dave and Annalisa,

It was very nice to see you both at CASQA. From the conversation on Monday evening, attached is a recently released stormwater management costing guide. Maureen identified this resource.

It was assembled by the Water Research Foundation and ASCE's Environment and Water Resources Institute. It is a companion to ASCE's [Cost of Maintaining Green Infrastructure](#) publication, which we have been using as a resource.

There is a guide and a forthcoming database of actual numbers, based on outreach. The guide is out, and the database of costs is (hopefully, it seems) to be assembled in support of one of the EPA-funded national stormwater model projects.

Maureen mentioned she will get in touch to organize a discussion on EFC projects. There could be some nice crossover between the focus groups on asset management we are thinking to do, and your concept of technical assistance outreach discussed at CASQA.

Cheers,
Erik



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